

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (withdrawn) A decomposition apparatus for decomposing an organic compound fluid such as a gas of an organic compound, a liquid thereof, a gas containing an organic compound, and a liquid containing an organic compound, which comprises:

an excimer lamp emitting UV light for decomposing said organic compound, and
a decomposition container provided with an excimer lamp for decomposing said organic compound in said organic compound fluid.

2. (withdrawn) A decomposition apparatus as claimed in Claim 1, wherein two or more decomposition containers each having said excimer lamp are jointed for flowing said fluid in one container to the other container in order.

3. (withdrawn) A decomposition apparatus as claimed in Claim 1, wherein said container is equipped with a flow rate buffering material for slowing down a flow rate of said fluid.

4. (withdrawn) A decomposition apparatus as claimed in Claim 1, wherein said decomposition container is equipped with a contact part between said fluid and a catalyst gas for promoting decomposition of the organic compound.

5. (withdrawn) A decomposition apparatus as claimed in Claim 1, wherein an organic compound to be decomposed selected from flon, dioxin (polychlorinated dibenzo-para-dioxin), PCB (polychlorinated biphenyl), trichloroethylene, tetrachloroethylene, dichloromethane, tetrachloromethane, 1,2-dichloroethane, 1,1-

dichloroethane, cis-1,2-dichloroethane, 1,1,1-trichloroethane, 1,3-dichloropropene and a mixture thereof.

6. (withdrawn) A decomposition apparatus as claimed in Claim 1, wherein said excimer lamp comprises:

a discharging vessel made of a dielectric material with excellent permeability of UV light,

an inner tube equipped on the inside of the discharging vessel, a protect tube equipped on the outside of the discharging vessel,

an outer electrode equipped in the position between the protect tube and the discharging vessel,

an inner electrode equipped on the inside of the inner tube,

a filling gas filled up in said discharging vessel, and

a power supply for applying a voltage between said outer electrode and said inner electrode.

7. (withdrawn) A decomposition apparatus as claimed in Claim 6, wherein said excimer lamp comprises:

said power supply applying a high frequency voltage from 1 to 20 MHz to a metal container and the inner electrode.

8. (withdrawn) A decomposition apparatus as claimed in Claim 1, wherein a wave length of UV light is of 222nm or below.

9. (withdrawn) A decomposition apparatus of an organic compound fluid such as a gas of an organic compound, a liquid thereof, a gas containing an organic compound and a liquid containing an organic compound, which comprises:

an excimer emission body equipped with an inner electrode,

a metal container equipped to the outside of said excimer emission body for filling up at least one selected from a liquid of an organic compound and a liquid containing organic compound a power supply for applying a high frequency voltage between the inner electrode and the metal container, and

a UV light irradiated from said excimer emission body to said liquid in said metal container allows to generate OH radical and O radical in the liquid, and

the radical cutting some bond of the organic compound so that the organic compound in the liquid is decomposed easily.

10. (withdrawn) A decomposition apparatus as claimed in Claim 9, wherein said excimer emission body comprises:

a discharging vessel made of a dielectric material with excellent permeability of UV light,

an inner tube equipped on the inside of said discharging vessel, an inner electrode equipped on the inside of said inner tube, and a filling gas filled up in said discharging vessel.

11. (withdrawn) A decomposition apparatus as claimed in Claim 9, wherein said excimer lamp comprises:

said power supply applying a high frequency voltage from 1 to 20 MHz to the metal container and the inner electrode.

12. (withdrawn) A decomposition apparatus as claimed in Claim 9, wherein an organic compound is selected from flon, dioxin (polychlorinated dibenzo-para-dioxin), PCB (polychlorinated biphenyl), trichloroethylene, tetrachloroethylene, dichloromethane, tetrachloromethane, 1,2-dichloroethane, 1,1 -dichloroethane, cis-1,2-dichloroethane, 1,1,1-trichloroethane, 1,3-dichloropropene and a mixture thereof.

13. (withdrawn) A decomposition apparatus as claimed in Claim 9, wherein a wave length of UV light is of 222nm or below.

Claims 14-18. (canceled).

Claims 19-24. (canceled).

25. (new) A method for decomposing an organic compound contained in a fluid in a state of liquid or gas, comprising steps of:

flowing said fluid into a decomposition container provided with an excimer lamp which is composed of a discharging vessel made of a dielectric material with permeability of UV light and filled up with a filling gas, an inner electrode equipped inside an inner tube provided inside said discharging vessel and an outer electrode, and applying a high frequency voltage from 1 to 20 MHz between the inner electrode and the outer electrode of the excimer lamp, while flowing the fluid into the decomposition container,

thereby decomposing an organic compound contained in the fluid by emission of ultraviolet light irradiated from the excimer lamp.

26. (new) A decomposition method as claimed in claim 25, wherein an organic compound is selected from flon, dioxin (polychlorinated dibenzo-para-dioxin), PCB (polychlorinated biphenyl), trichloroethylene, tetrachloroethylene, dichloromethane, tetrachloromethane, 1,2-dichloroethane, 1,1-dichloroethane, cis-1,2-dichloroethane, 1,1,1-trichloroethane, 1,3-dichloropropene and a mixture thereof.

27. (new) A decomposition method as claimed in claim 25, wherein a wave length of the UV light is 222nm or below.

28. (new) A method for decomposing said organic compound contained in a fluid in a state of liquid or gas, comprising steps of:

flowing said liquid into a decomposition container made of a metal and provided with an excimer lamp which is composed of a discharging vessel made of a dielectric material with permeability of UV light and filled up with a filling gas, an inner electrode equipped inside an inner tube provided inside said discharging vessel and an outer electrode which is a part of the decomposition container, and

applying a high frequency voltage from 1 to 20 MHz between the inner electrode and the outer electrode of the excimer lamp, while flowing the liquid into the decomposition container,

thereby decomposing an organic compound contained in the liquid by emission of ultraviolet light irradiated from the excimer lamp.

29. (new) A decomposition method as claimed in claim 28, wherein said organic compound is selected from flon, dioxin (polychlorinated dibenzo-para-dioxin), PCB (polychlorinated biphenyl), trichloroethylene, tetrachloroethylene, dichloromethane, tetrachloromethane, 1,2-dichloroethane, 1,1-dichloroethane, cis-1,2-dichloroethane, 1,1,1-trichloroethane, 1,3-dichloropropene and a mixture thereof.

30. (new) A decomposition method as claimed in claim 28, wherein a wave length of the UV light is 222nm or below.